NetLinxDiag by Control Concepts

User Manual

Date: 8/4/2011

Version: 1.0

Table of Contents

Introduction....3
Connection....3
Favorites....4
Settings Applications....6
Diag Your Program....6
Diagnostics....7
Control Device....12
Emulate Device....13
NetLinxDiag Support....15

Introduction

NetLinxDiag© is an iPhone application that helps you diagnose AMX™ NetLinx® control systems. In order to diagnose these systems you will need to understand the device address assignments with in the running NetLinx programs. You will also need to make sure your iPhone can connect to the controller that you wish to debug. This manual will cover how to add devices to the notification list, and also the use of Control and Emulate Devices. This program performs some of the same features as AMX's own NetLinx Diagnostics.

Connection

The iPhone must be connected to WIFI in order to connect to the controller on the local network. NetLinxDiag has a little search glass on the connection page; this will attempt to find all the AMX controllers that are on your local subnet.

Selecting a controller from the searched list will assign it to the connection text box and close the search list. Since some networks are large and complex, your controller may not actually show up in the list. Scroll through the list too see all controllers NetLinxDiag has found. Pressing the white section in the list, will select that IP address for connection. If your controller does not show up in the list, this does not

mean you cannot connect to it, just means that more than likely it is not on the same subnet. In that case go ahead and manually enter in the controller's IP address and press "Connect".

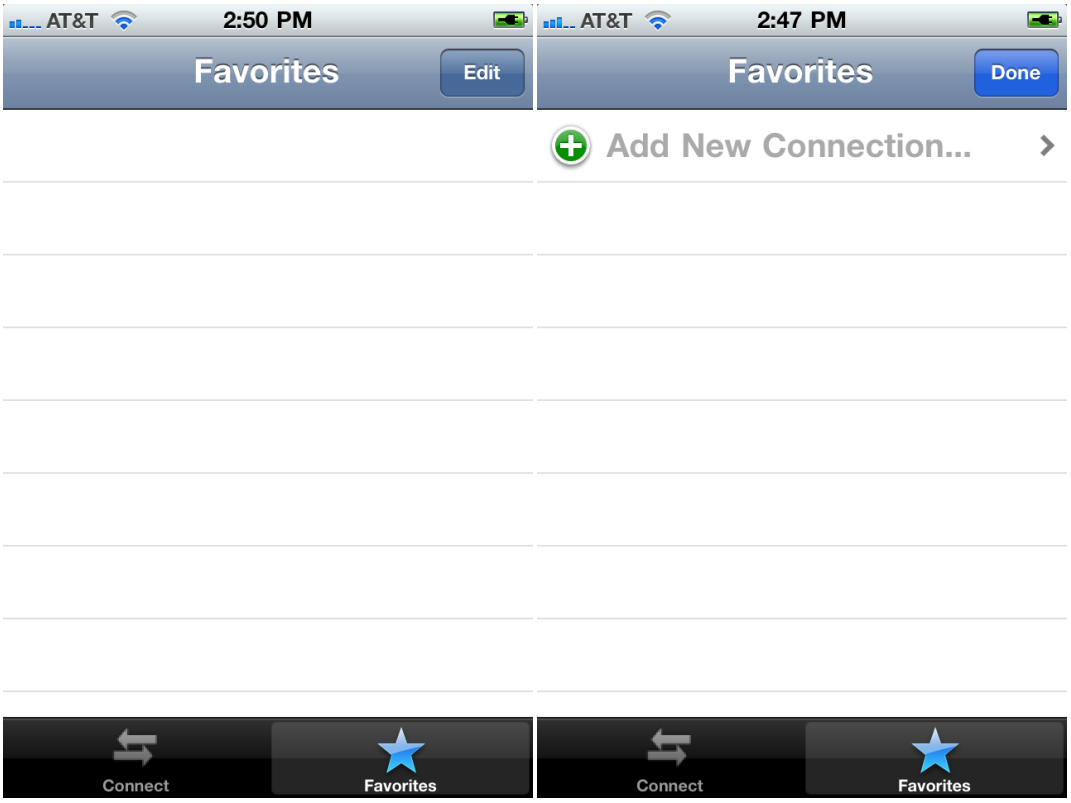
You will notice that a plus sign button has been displayed next to the IP address of the controller. You can actually press the plus sign button and add this controller to your favorites list. If a blue star button shows up next to a controllers IP address, this is an indication that the controller is already in your favorites list.

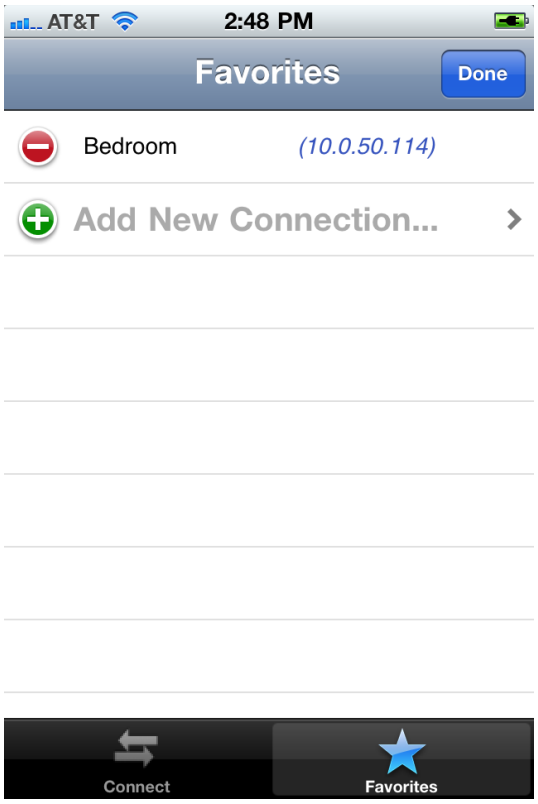
Favorites

Favorites are a way for you to manage the controllers that you use every day. You will be allowed to store virtually an unlimited amount of controllers in your favorite list.

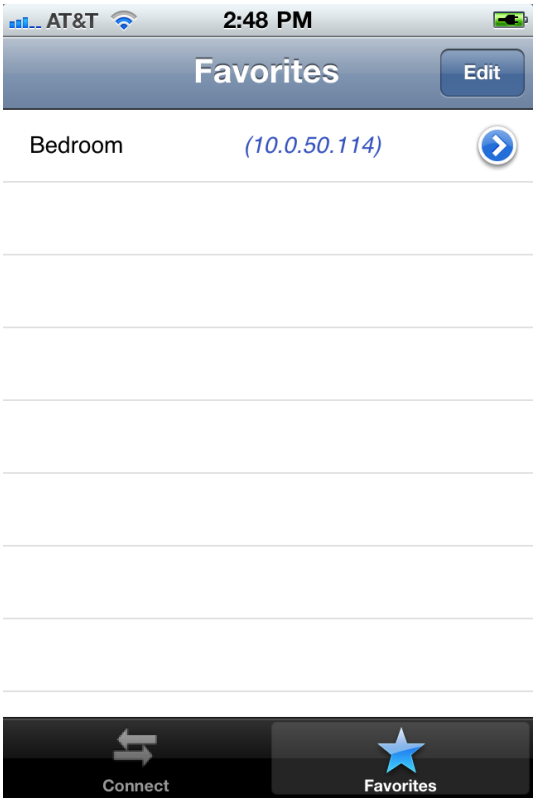
To add a controller to your Favorites' list, press the "Plus" button that is associated with an IP Address from the search section on your connection page. This will automatically switch NetLinxDiag to the Favorites page and prepare the form to add this controller to your list.

You can also press the "Edit" button on the Favorites page, than press "Add New Connection…" and manually enter in the IP Address and name and press "Save".





Once you are done entering favorites, press the “Done” button.



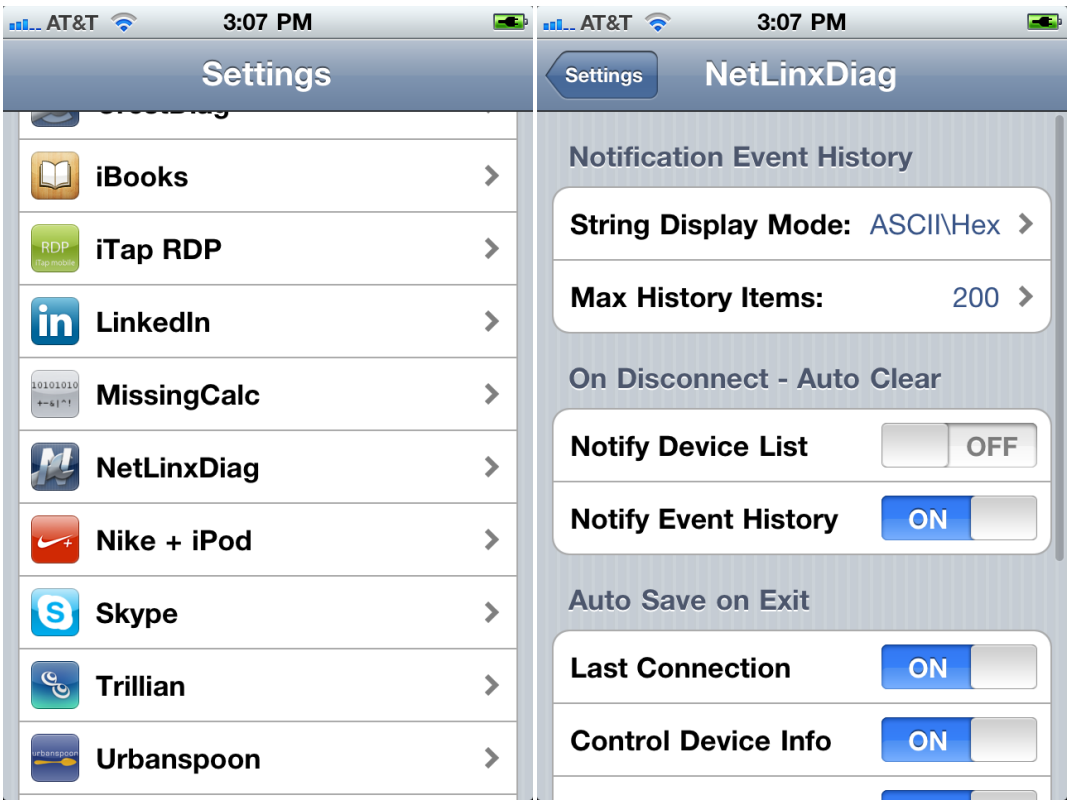
To edit the name associated with a saved controller, simply press the blue arrow button next to the entry in the table and the edit form will display. You can manually change the name and press save.

To delete one or more controllers from your list, press the “Edit” button. Then select each controller from the list that you wish to delete. Press “Done” when you have you finished deleting controllers.

When not in editing mode, pressing any entry in the table will select that entry for connection and switch you back to the connection page.

Settings Applications

NetLinxDiag has a variety of settings found in the settings application on your iPhone. There are many settings that will help you get the most out of the application. Please make sure the settings are configured for your use.



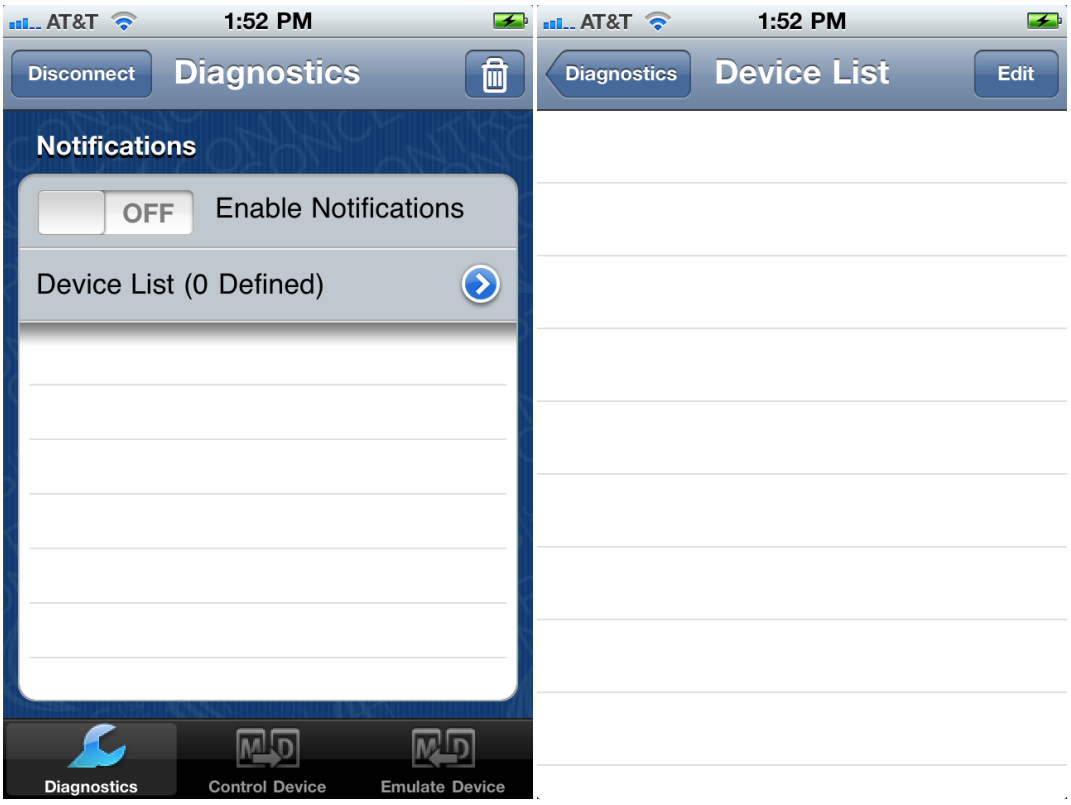
Diag Your Program

Once connected to your controller, you will notice a disconnect button on the top left of the application and also three tabs on the bottom. Pressing disconnect will disconnect you from the controller and pop you back to the connection screen. The “Diagnostics” tab is where you will assign device to the notifications list and also watch the messages come in from the controller. The “Control Device” tab

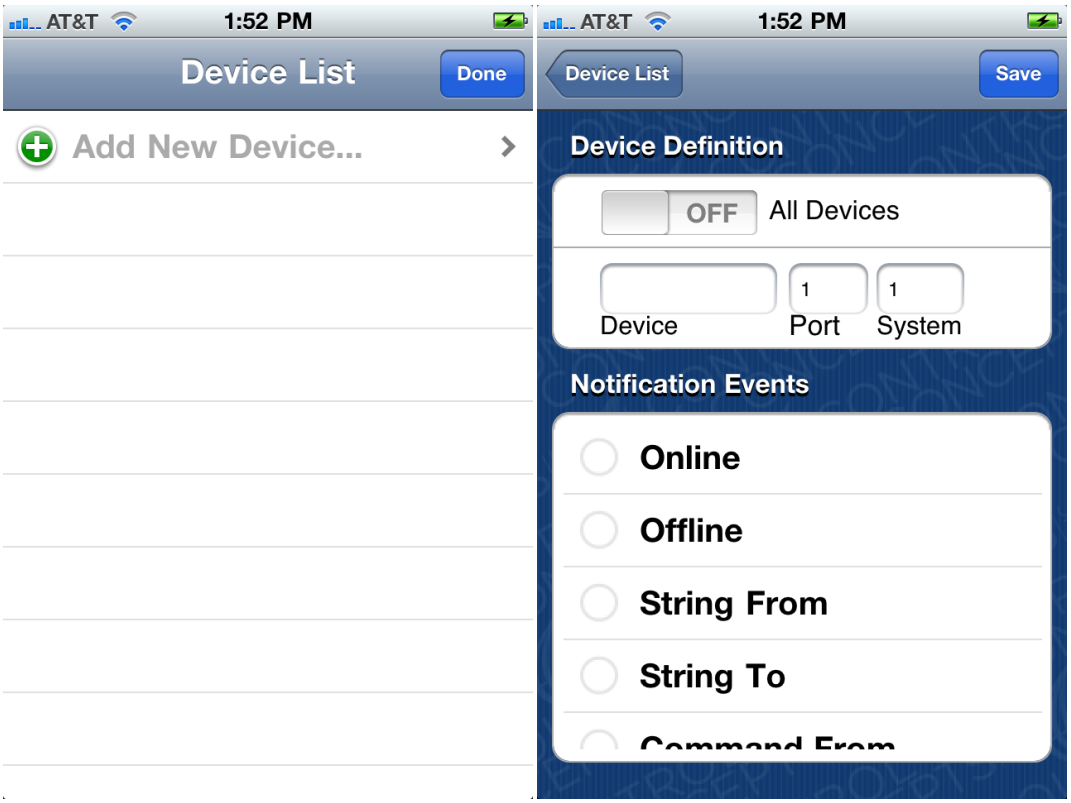
allows you to send channel, level, command, and string messages to any device on the system. The "Emulate Device" tab allows you to send channel, level, command, and string messages to the controller acting like a device that may or may not be on your system at the time. If you coded events on the device your emulating, you will notice the code for these events activating and thereby allowing you to test your code.

Diagnostics

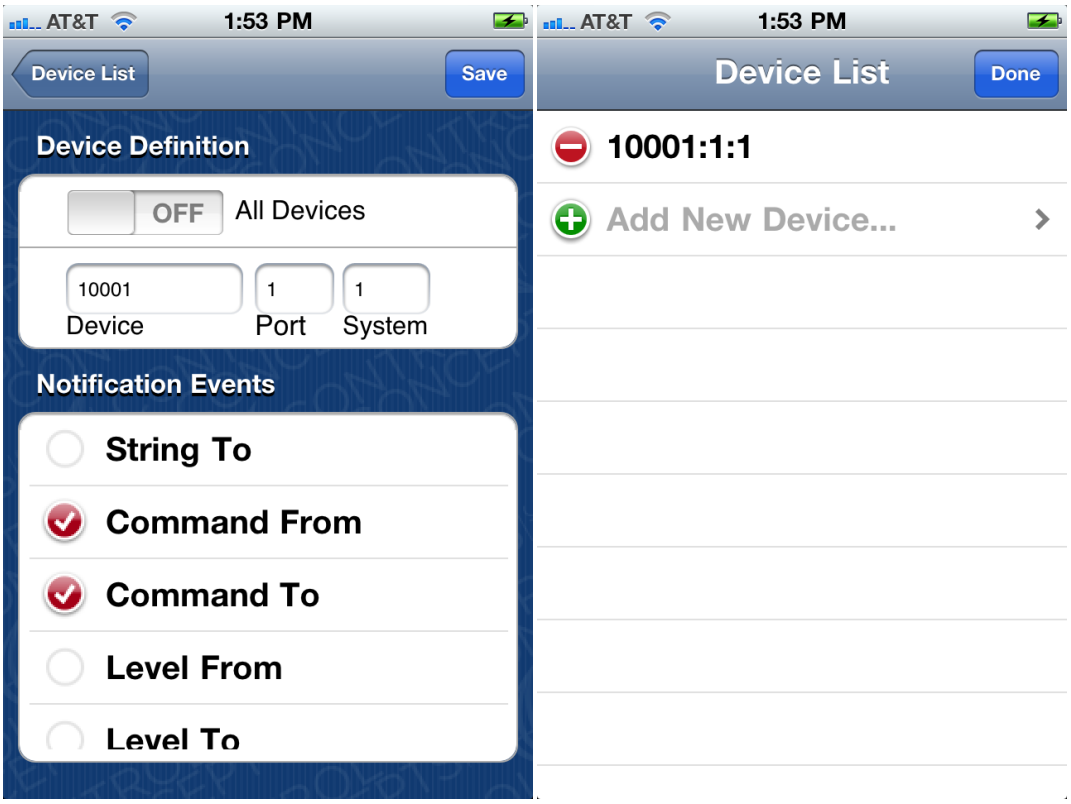
You will notice while on the "Diagnostics" tab, an "Enable Notifications" switch and a "Device List" indication of quantity defined. In order to enable notifications, you must have at least one entry in your device list. Pressing the blue arrow will allow you to define your list.



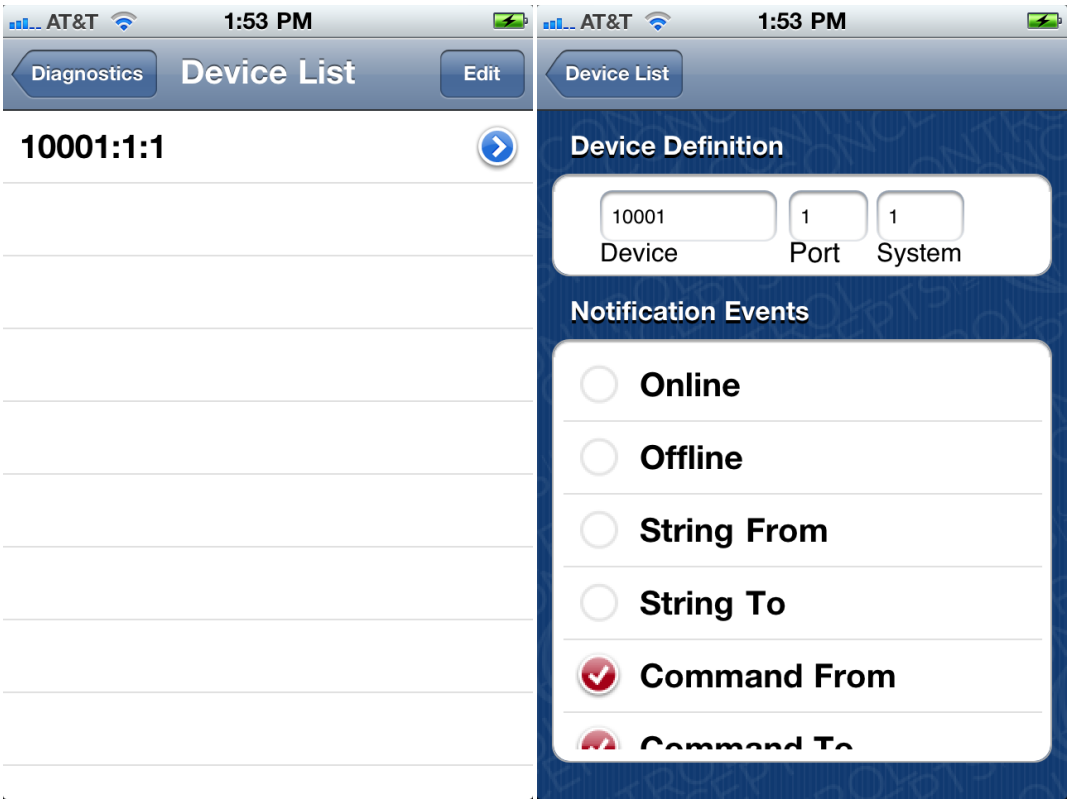
Pressing, “Edit” when on the Device List will allow you to Add devices to the list.



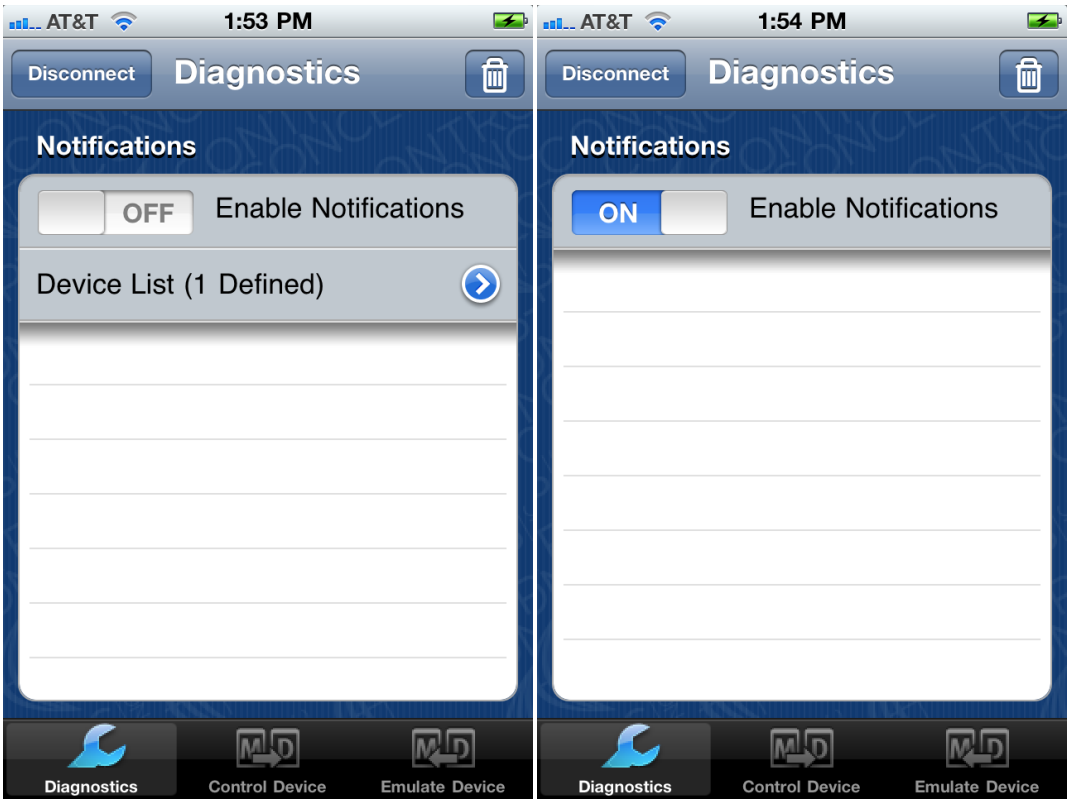
On the top of the Add Device screen you will notice a “All Device” switch, turning this on will allow you to watch all messages from the system. If you want to watch specific devices, enter in a valid Device Port System (DPS) for the device you wish to debug. You must also enable the events that you would like to debug. Scroll through the list and select the Event types that you are interest in debugging for this device.



Once you are done with entering your DPS and selecting the events for this device, press “Save”. This will take you back to the Device List; you can either add more devices or press done. Putting the Device List in edit mode also allows you to delete devices off your device list. Press the red minus button and than press “Delete”.

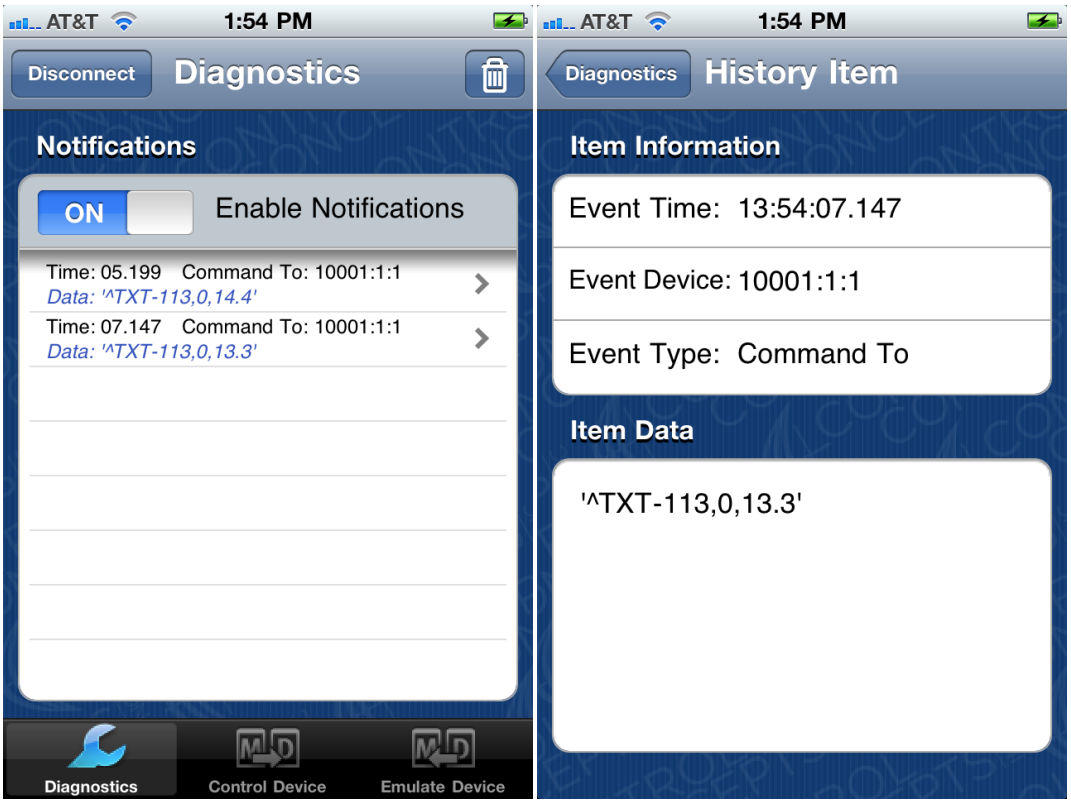


You can actually change your Notifications events on the defined device when not in editing mode. Simply press the blue arrow button next to the device address, and select and deselect the events you require for debugging, these are changed as soon as you press the event, no need to save. Press the “Device List” arrow to go back to the device list.



When you are done editing your Device List, press the “Diagnostics” arrow at the top to go back to Diagnostics Control. You will notice that the Device List will have your current count you have declared in your Device List.

Pressing the ON switch will put the application in Diagnostics Mode. You will notice the Device List gets hidden when you turn on Notifications. Notification must be off in order to add/remove devices from your Device List.



When Message happen on the system and match your choices that you made in your Device List, you will see the message appear in the Notification List. You can clearly see from the entry, the time of the event, what type of event, the DPS of the device, and finally the data of the event. Sometimes the data, especially from “Strings” and “Commands” are so long that they can truncate on this screen. Pressing an item will bring up a detail screen that will show you the complete information of the event.

By default only 100 Notification History items are kept, once it passes this default size the older events are lost. You can go into the Settings Application and increase the size of this history up to 1000 items.

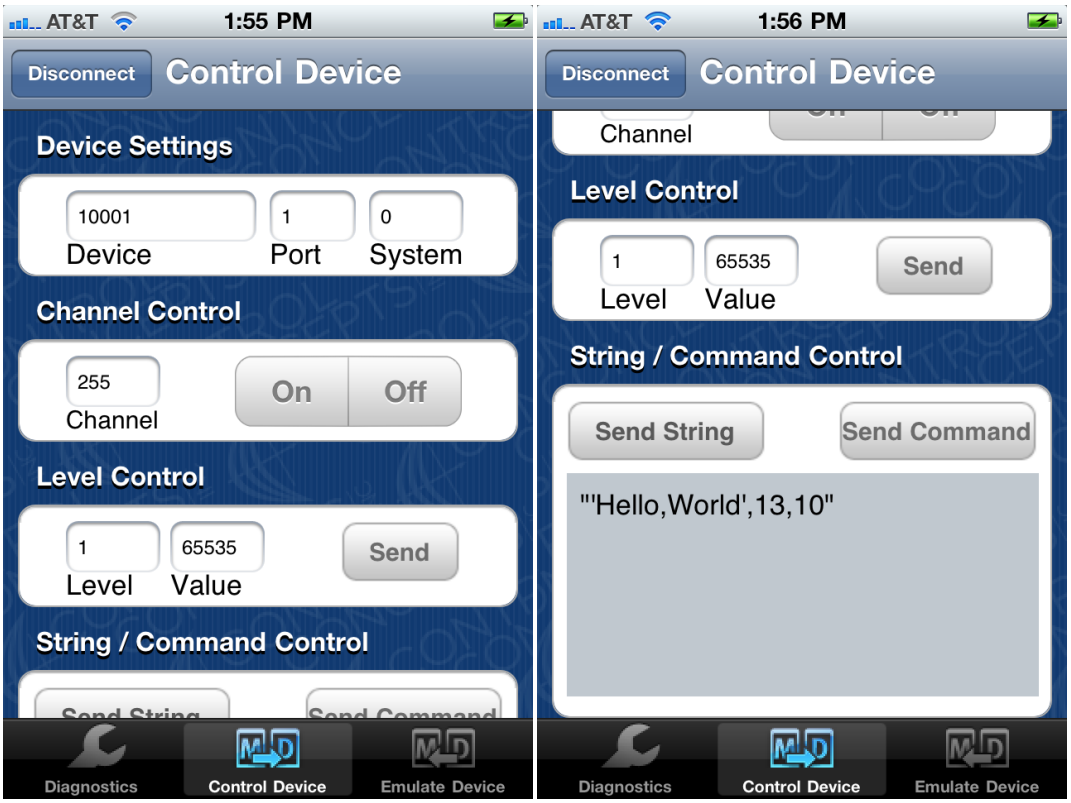
If the events are scrolling by so fast and you cannot debug the system. Simply turn off the switch and scroll through the list to see the items. You may turn back on the switch at anytime; of course you will loose the event history items that took place while the switch was off. Even though it is easier at times to you assign “All Devices”, if you setup a more exacting device list, will allow you watch just the messages that you care about and thus cut back on all the unneeded traffic.

Control Device

The “Control Device” section allows you to send Channels, Levels, Command, and String to any device on the system. You DO NOT need to have Notifications Enabled in order to use the controls in this section. You can use Notifications at the same time as Control Device. You can bounce back and forth between tabs and watch what your messages have caused.

Note: I have noticed both in this application and AMX’s own NetLinx diagnostics that when you send “Strings” and “Commands” the controller does not send back the history notification message on real

devices indicating they took place. I have confirmed physically that the messages work, they just do not report back to the diagnostics software that they happened. The controller does seem to report back when you send "Strings" and "Commands" to virtual devices.



The first step to use the Control Device section, is to enter in a valid DPS for the device you which to control. Once that is correct, you can control the channels, levels, Command, Strings.

Channel, Level and Level Value must be a valid integer between 1 and 65535.

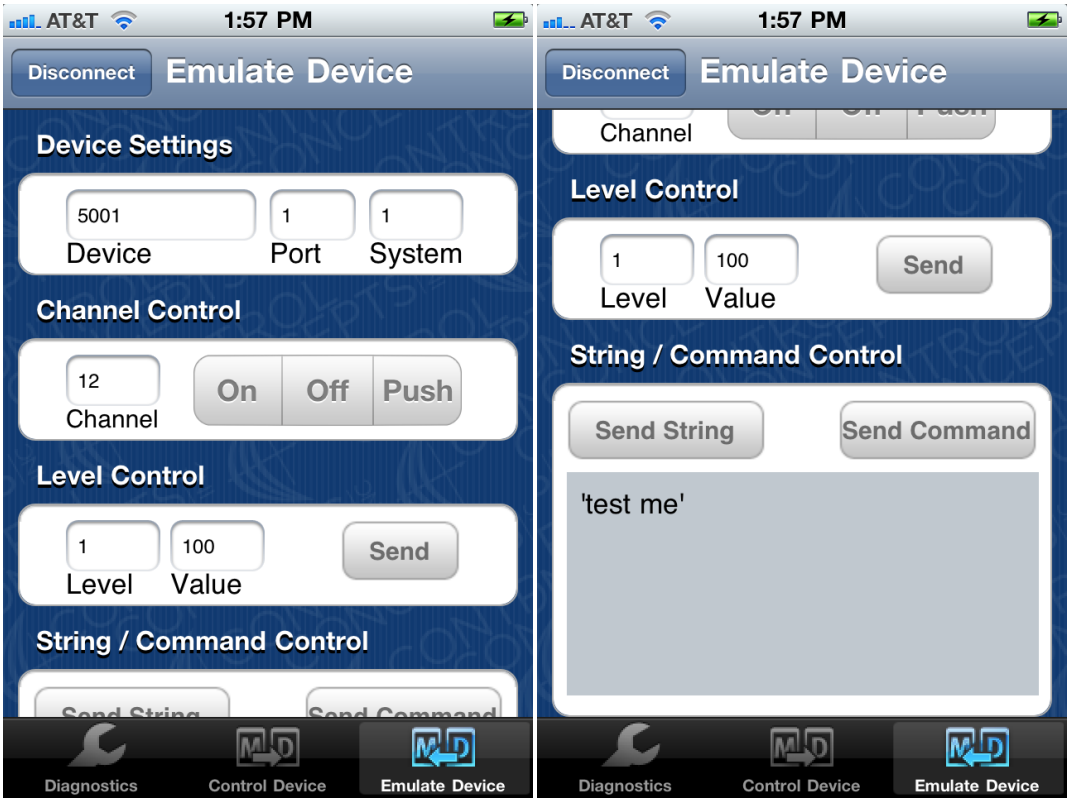
String and Commands section needs to be a valid "AMX" encoded string using the correct syntax as shown above.

Once you enter in the valid information, you can press the controls associated with the type of message you wish to send.

Emulate Device

The "Emulate Device" section allows you to send Channels, Levels, Command, and String to the controller on the system. You DO NOT need to have Notifications Enabled in order to use the controls from in this section. You can use Notifications at the same time as Emulate Device. You can bounce back and forth between tabs and watch what your messages have caused.

Note: The main difference between "Control Device" and "Emulate Device" is when using "Control Device" you are sending the messages to a device to have them react a certain way. Emulate device actually send the message to the controller causing your programmed events to trigger allow you to test portions of your code that you could not otherwise test.



The first step to use the Emulate Device section, is to enter in a valid DPS for the device you which to emulate. Once that is correct, you can control the channels, levels, Command, Strings.

Channel, Level and Level Value must be a valid integer between 1 and 65535.

String and Commands section needs to be a valid "AMX" encoded string using the correct syntax as shown above.

Once you enter in the valid information, you can press the controls associated with the type of message you wish to emulate.

NetLinxDiag Support

You may email mobile-apps@controlconcepts.net in order to get support for this application. Please send any enhancement ideas you may have. All are welcome.

Thank you for purchasing this software, NetLinxDiag support team.